STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

October 23, 2002

CERTIFIED MAIL No. 7000 0520 0016 0850 9023

Mr. Jim Beckwith
Environmental Manager
J.R. Simplot
P.O. Box 676
Heyburn, ID 83336

RE: AIRS Facility No. 067-00017, J.R. Simplot, Heyburn
Final Tier II Operating Permit and Permit to Construct

Dear Mr. Beckwith:

The Idaho Department of Environmental Quality (Department) is issuing Tier II Operating Permit and Permit to Construct No. 067-00017 for the J.R. Simplot facility located in Heyburn, in accordance with the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.400 - 470 and 58.01.01.200 - 228, respectively.

The enclosed permit is effective immediately and is based on the information contained in your permit application and on the relevant comments received during the public comment period. Modification to and/or renewal of this permit shall be requested in a timely manner in accordance with the *Rules for the Control of Air Pollution in Idaho*.

Steve VanZandt, of the Twin Falls Regional Office will contact you regarding a meeting with the Department to discuss the permit terms and requirements. The Department recommends attendance of your facility's plant manager, responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with permit conditions.

You, as well as any other entity, may have the right to appeal this final agency action pursuant to IDAPA 58.01.23 *(Rules of Administrative Procedure Before the Board of Environmental Quality)*. A petition may be filed with the Hearings Coordinator, Department of Environmental Quality, 1410 N. Hilton, Boise, ID 83706-1255, within 35 days of the date of this decision. However, the Department encourages you to contact us to discuss any concerns you may have with the enclosed permit prior to filing a petition for a contested case.

If you have any questions regarding the terms or conditions of the enclosed permit, please contact Mike Simon at (208) 373-0502 or msimon@deq.state.id.us.

Sincerely,

Katherine B. Kelly
Administrator
Air Quality Division

KK/CZ/sm T2-000420 G:\AIR QUALITY\STATIONARY SOURCE\SS LTD\T2\JR SIMPLOT HEYBURN\FINAL PREP\T2-000420 FINAL PERMIT LTR (9-25-02).DOC

Enclosure

CC: Steve VanZandt, Twin Falls Regional Office
Joan Lechtenburg, Air Quality Division
Laurie Kral, EPA Region 10
Sherry Davis, Technical Services

Air Quality
TIER II OPERATING PERMIT
and
PERMIT TO CONSTRUCT

State of Idaho
Department of Environmental Quality

PERMIT NO.: 067-00017

AQCR: 063 **CLASS:** A

SIC: 2951 **ZONE:** 12

UTM COORDINATE (km): 273.1, 4714.2

1. **PERMITTEE**
   J.R. Simplot Co., Food Group; Heyburn Plant

2. **PROJECT**
   Facility-wide Tier II Operating Permit and Permits to Construct

3. **MAILING ADDRESS**	**CITY**	**STATE**	**ZIP**
P.O. Box 676	Heyburn	ID	83336

4. **FACILITY CONTACT**	**TITLE**	**TELEPHONE**
Jim Beckwith	Manager of Environmental Health and Safety	(208) 677-7115

5. **RESPONSIBLE OFFICIAL**	**TITLE**	**TELEPHONE**
Bruce Hauber	Heyburn Plant Unit Director	(208) 677-7189

6. **EXACT PLANT LOCATION**	**COUNTY**
Within city limits of Heyburn on Highway 30 North	Minidoka/Cassia

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
   Potato and other food processing; ethanol production

8. **PERMIT AUTHORITY**

This permit is issued according to the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.400-470, and IDAPA 58.01.01.200-228. This permit pertains only to emissions of air contaminants, which are regulated by the state of Idaho and to the sources specifically allowed to be operated by this permit.

This permit is not transferable to another person, place, or piece or set of equipment. This permit will expire if construction has not yet begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented in the application and the Idaho Department of Environmental Quality's technical analysis of the supplied information. Changes in design or equipment that result in any change in the nature or amount of emissions may be considered a modification. Modifications are subject to Department review in accordance with IDAPA 58.01.01.200 of the *Rules for the Control of Air Pollution in Idaho*.

DATE ISSUED: October 23, 2002

KATHERINE B. KELLY, ADMINISTRATOR, AIR QUALITY DIVISION
DEPARTMENT OF ENVIRONMENTAL QUALITY

TABLE OF CONTENTS

ACRONYMS, UNITS, and CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CH_4	Methane
CFR	Code of Federal Regulations
CO_2	carbon dioxide
CO	carbon monoxide
Department	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	Environmental Protection Agency
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
H_2S	Hydrogen sulfide
HAPs	Hazardous Air Pollutants
IDAPA	A numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	Kilometer
lb/hr	pounds per hour
m	meter(s)
MACT	Maximum Available Control Technology
MMBtu	million British thermal units
NESHAP	Nation Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
O_3	Ozone
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	*Rules for the Control of Air Pollution in Idaho*
Scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
T/day	tons per day
SO_x	sulfur oxides
T-R	Transform-Rectification
T/yr	tons per year
$\mu g/m^3$	micrograms per cubic meter
UTM	Universal Transverse Mercator
VOC	volatile organic compounds
WESP Stack	Wet Electrostatic Precipitator Stack

1. PERMIT SCOPE

Purpose

The purpose of this Tier II operating permit and Permit to Construct is to incorporate the requirements of existing permits and consent orders and to protect ambient air quality standards. The requirements of this permit will be incorporated into the facility Title V (Tier I) operating permit.

This permit incorporates the following permits and Consent Orders:

- PTC No. 067-00017, issued June 30, 2000
- PTC No. 067-00017, issued April 3, 2000
- PTC No. 067-00017, issued November 15, 1999
- PTC No. 067-00017, issued February 3, 1999
- PTC No. 067-00017, issued May 28, 1998
- Consent Order, issued September 27, 2000
- Consent Order, issued October 7, 1999
- Consent Order, issued November 12, 1998

Regulated Sources

Table 1.1 below lists the sources that are regulated in this permit.

Table 1.1 REGULATED SOURCES

Permit Sections	Source Description	Emissions Control
2.	FACILITY-WIDE CONDITIONS	
3.	DRYERS Line 1 dryer, line 2 dryer, and line 4 dryer.	None
4.	FRYERS Line 1 fryer, line 2 fryer, line 3 fryer, and line 4 fryer.	PM_{10} emissions are controlled by a wet electrostatic precipitator.
5.	SPRINGFIELD BOILER Natural gas-fired boiler; manufactured by Springfield; Model S/N-481; rated capacity 37.8 MMBtu/hr. CLEAVER-BROOKS BOILER Natural gas-fired boiler manufactured by Cleaver-Brooks; model DL76-WL1172; rated capacity 76.7 MMBtu/hr. NEBRASKA BOILER Natural gas-fired boiler manufactured by Nebraska; Model Nos-2a-58 (low NO_x burner technology; rated capacity 80 MMBtu/hr.	PM_{10} emissions from the boilers are uncontrolled. Nebraska boiler is equipped with low NO_x burners.
6.	ETHANOL PRODUCTION PLANT AND STORAGE TANKS The ethanol production plant uses fruit, grain, sugar, and vegetable waste, including potato waste from the Heyburn facility and other facilities, to produce 200-proof ethanol. The ethanol is produced and stored in tanks at the facility.	None
7.	MATERIAL HANDLING SYSTEM The ethanol plant receives shelled corn, whole wheat, milo, granulated sugar, and other grains from delivery trucks. The raw materials are moved several times via screw conveyors and recovery elevators into storage bins, surge bins, and weigh belts. Material is then dropped into a hammer mill to be ground into the correct size for use in the ethanol plant.	PM_{10} emissions from the receiving area, the material handling operations, and the hammer mill are controlled by a baghouse.
8.	ADI-BVF DIGESTER FLARES The ADI-BVF anaerobic digester, where water from the processed potatoes at the plant is retained and acted upon by bacteria, is located at the JRS wastewater treatment facility. Biogas byproducts (CH_4, CO_2 and H_2S) collected from under the cover of the digester are burned by flares.	PM/PM_{10} emissions are uncontrolled. H_2S will be controlled by a scrubbing system located between the ADI-BVF anaerobic digester and the biogas flares. The treated biogas will be mixed with untreated biogas before it is sent to the flares.

2. FACILITY-WIDE CONDITIONS

Fugitive Emissions

2.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.

[IDAPA 58.01.01.650-651, 5/1/94]

2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

[IDAPA 58.01.01.405, 5/1/94]

2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.405, 5/1/94]

2.4 The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions, to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each quarterly fugitive emission inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

[IDAPA 58.01.01.405, 5/1/94]

2.5 Fugitive emissions shall not be observed leaving the property for a period or periods aggregating more than three minutes in any 60-minute period. Visible emissions shall be determined by EPA Reference Method 22, as described in 40 CFR 60, Appendix A, or by a Department approved alternative method.

[PTC No. 067-00017, 11/15/99; PTC No. 067-00017, 6/30/00]

Odors

2.6 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776, 5/1/94]

2.7 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.405, 5/1/94]

Visible Emissions

2.8 No person shall discharge any air pollutant to the atmosphere from any point of emission for a period or

periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

2.9 The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than 3 minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.405, 5/1/94]

Excess Emissions

2.10 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 130-136 shall govern in the event of conflicts between the subsections of Permit Condition 2.10 and the regulations of IDAPA 58.01.01.130-136.

2.10.1 The person responsible for or in charge of a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing such excess emissions event; to reduce the frequency of occurrence of such events; to minimize the amount by which the emission standard is exceeded; and shall, as provided below or upon request of the Department, submit a full report of such occurrence, including a statement of all known causes, and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

2.10.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emission unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to, the following:

[IDAPA 58.01.01.133, 4/5/00]

- A prohibition of any scheduled startup, shutdown, or maintenance resulting in excess emissions shall occur during any period in which an Atmospheric Stagnation Advisory and/or a Wood Stove Curtailment Advisory have/has been declared by the Department.

[IDAPA 58.01.01.133.01.a, 3/20/97]

- Notifying the Department of the excess emissions event as soon as reasonably possible, but no later than two hours prior to the start of the event unless the owner or operator demonstrates to the Department's satisfaction that a shorter advanced notice was necessary.

[IDAPA 58.01.01.133.01.b, 4/5/00]

- The owner or operator of a source of excess emissions shall report and record the information required pursuant to Permit Conditions 2.9.4 and 2.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.c, 3/20/97]

2.10.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/5/00]

2.10.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures which cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

- The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

- The owner or operator shall notify the Department of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to the Department's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

- The owner or operator shall report and record the information required pursuant to Permit Conditions 2.10.4 and 2.10.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

2.10.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, the Department may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the excess until such time as the condition causing the excess emissions has been corrected or brought under control. Such action by the Department shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03, 4/5/00]

2.10.4 A written report for each excess emissions event shall be submitted to the Department by the owner or operator no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01, .02, 3/20/97]

2.10.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to the Department upon request. The excess emissions records shall include the information requested by IDAPA 58.01.01.136.03(a)

and (b) as summarized in the following:

[IDAPA 58.01.01.136.01, .02, .03, 3/20/97]

- An excess emissions record book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to the Department pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment.

[IDAPA 58.01.01.136.03.a, 4/5/00]

- Copies of all startup, shutdown, and scheduled maintenance procedures and upset, breakdown, and safety preventative maintenance plans that have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97] [IDAPA 58.01.01.130-136, 4/5/00 (State-only; federally enforceable upon approval into the SIP), IDAPA 58.01.01.322.08.b, 3/23/98]

Fuel-burning Equipment

2.11 Unless specified elsewhere in the permit, the following shall apply to fuel-burning equipment at the facility:

- For fuel-burning equipment commencing operation on or after October 1, 1979, with a rated input of 10 MMBtu/hr or more, the permittee shall not discharge to the atmosphere particulate matter in excess of 0.015 gr/dscf of effluent gas corrected to 3% O_2 by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% O_2 by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% O_2 by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% O_2 by volume for wood products.

[IDAPA 58.01.01.676, 5/1/94]

- For fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of 10 MMBtu/hr or less, the permittee shall not discharge to the atmosphere particulate matter in excess of 0.015 gr/dscf of effluent gas corrected to 3% O_2 by volume for gas; 0.050 gr/dscf of effluent gas corrected to 3% O_2 by volume for liquid 0.100 gr/dscf of effluent gas corrected to 8% O_2 by volume for coal, and 0.200 gr/dscf of effluent gas corrected to 8% O_2 by volume for wood products.

[IDAPA 58.01.01.677, 5/1/94]

Sulfur Content

2.12 No person shall sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:

- ASTM Grade 1 fuel oil - 0.3% by weight.
- ASTM Grade 2 fuel oil - 0.5% by weight.
- Residual fuel oil (ASTM Grade 4,5, and 6) – 1.75 % by weight.

2.13 The permittee shall maintain supplier certification of fuel oil sulfur content.

[IDAPA 58.01.01.728, 5/1/94]

Reports and Certifications

2.14 Any reporting required by this permit, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete. Any reporting required by this permit shall be submitted to the following:

Air Quality Permit Compliance
Department of Environmental Quality
Twin Falls Regional Office
601 Pole Line Road, Suite 2
Twin Falls, ID 83301
Phone: (208) 736-2190 Fax: (208) 736-2194

[IDAPA 58.01.01.405, 5/1/94]

Monitoring and Recordkeeping

2.15 The permittee shall maintain sufficient recordkeeping to assure compliance with the terms and conditions of this operating permit. Recording of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to Department representatives upon request.

[IDAPA 58.01.01.405, 5/1/94; IDAPA 58.01.01.322.07, 5/1/94]

Open Burning

2.16 The permittee shall comply with the provisions of IDAPA 58.01.01.600-616, *Rules for Control of Open Burning.*
[IDAPA 58.01.01.600-616, 5/1/94

Compliance Testing

2.17 If testing is required, the permittee shall provide notice of intent to test to the Department at least 15 days prior to the scheduled test or shorter time period as provided in a permit, order, consent decree, or by Department approval. The Department may, at its option, have an observer present at any emissions tests conducted on a source. The Department requests that such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior Department approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by the Department for any testing deviations, the Department may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any compliance test, the permittee is strongly encouraged to submit in writing to the Department, at least 30 days in advance, the following for approval:

- The type of method to be used.
- Any extenuating or unusual circumstances regarding the proposed test.
- The proposed schedule for conducting and reporting the test.

Within 30 days following the date on which a compliance test required by this permit is concluded, the permittee shall submit to the Department a report for the respective test. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to the following:

Air Quality Permit Compliance
Department of Environmental Quality
Twin Falls Regional Office
601 Pole Line Road, Suite 2
Twin Falls, ID 83301
Phone: (208) 736-2190 Fax: (208) 736-2194

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.405.02]

Test Methods

2.18 If testing is required, the permittee shall use the test methods described in Table 2.2 to measure the pollutant emissions.

Table 2.2 TESTING METHODS

Pollutant	Test Method	Special Conditions
PM_{10}	EPA Method 201.a* and Method 202*	
PM	EPA Method 5*	
H_2S	Department Approved Method	
NO_X	EPA Method 7*	
SO_2	EPA Method 6*	
CO	EPA Method 10*	
VOC	EPA Method 25*	
Opacity	EPA Method 9*	If an NSPS 0source, IDAPA 58.01.01.625 and Method 9; otherwise, IDAPA 58.01.01.625 only.

* or Department-approved alternative in accordance with IDAPA 58.01.01.157

3. LINE 1 DRYER, LINE 2 DRYER, AND LINE 4 DRYER

3.1 Process Description

The dryers receive potatoes after being sorted, steam-peeled, cut, and blanched to remove surface moisture. The dryers are operated exclusively on natural gas. After drying, potatoes are placed in fryers.

Table 3.1 PROCESS DESCRIPTION

Process	Combustion Capacity (MMBtu/hr)	Potato Capacity(T/day)	Date Installed/Modified
Line 1 dryer	24.1	432	1968/1986
Line 2 dryer	22	456	1974/not applicable
Line 4 dryer	3.74	264	1989/not applicable

The line 1 dryer and line 2 dryer are manufactured by Proctor & Schwartz. The line 4 dryer is manufactured by Shockey Sheetmetal Inc. There is not a line 3 dryer at the Heyburn facility.

3.2 Control Description

Emissions from the line 1 dryer, line 2 dryer, and line 4 dryer are uncontrolled.

Emission Limits

3.3 Emission Limits

The PM_{10} emissions from the line 1 dryer, line 2 dryer, and line 4 dryer stacks shall not exceed any corresponding emission rate limits listed in Appendix A of this permit.

[IDAPA 58.01.01.403, 5/1/94]

Operating Requirements

3.4 Fuel Specification

The line 1 dryer, line 2 dryer, and line 4 dryer shall burn natural gas exclusively.

[IDAPA 58.01.01.405, 5/1/94]

3.5 Throughput Limit

3.5.1 The maximum throughput of finished potato product from the line 1 dryer shall not exceed 432 T/day. The maximum throughput of finished potato product from the line 1 dryer shall not exceed 138,200 tons per any consecutive 12-month period.

[IDAPA 58.01.01.405, 5/1/94]

3.5.2 The maximum throughput of finished potato product from the line 2 dryer shall not exceed 456 T/day. The maximum throughput of finished potato product from the line 2 dryer shall not exceed 146,000 tons per any consecutive 12-month period.

[PTC No. 067-00017, 11/15/99]

3.5.3 The maximum throughput of finished potato product from the line 4 dryer shall not exceed 264 T/day. The maximum throughput of finished potato product from the line 4 dryer shall not exceed 57,000 tons per any consecutive 12-month period.

[PTC No. 067-00017, 11/15/99]

Monitoring And Recordkeeping Requirements

3.6 Throughput

The permittee shall monitor and record, both daily and annually, the throughput of finished potato product from the line 1 dryer, line 2 dryer, and line 4 dryer to demonstrate compliance with Permit Condition 3.5. Throughput shall be recorded as tons per day and tons per year. The respective throughput for each day may be determined using monthly throughput records.

[PTC No. 067-00017, 11/15/99; IDAPA 58.01.01.405, 5/1/94]

3.7 PM_{10} Performance Tests

Within the first year of issuance of this permit, the permittee shall conduct performance tests to measure PM_{10} emissions from the line 1 dryer, line 2 dryer, and the line 4 dryer stack using the test methods and procedures contained in Permit Conditions 2.17 and 2.18 to demonstrate compliance with Permit Condition 3.3. Tests shall be conducted in accordance with IDAPA 58.01.01.157 and the following requirements:

3.7.1 Visible emissions shall be observed during each test run using methods specified in IDAPA 58.01.01.157.

3.7.2 The performance tests for the line 1, line 2, and line 4 dryer stacks shall be conducted while the dryers are operating at worst case normal operating conditions (as documented by the permittee) or while they are operating at a minimum of 80% of their maximum throughput limit (measured as finished potato product).

3.7.3 If the PM_{10} measured in the performance tests is less than or equal to 75% of the permitted PM_{10} emission limits in this permit, no further testing shall be required for this section of the permit. If the PM_{10} measured during the performance tests is greater than 75%, but less than or equal to 90% of the permitted PM_{10} emission limits in this permit, a second test shall be required in the third year of issuance of this permit. If the PM_{10} measured during the performance tests is greater than 90% of the permitted PM_{10} emission limits in this permit, the permittee shall conduct a performance test annually.

[IDAPA 58.01.01.405, 5/1/94]

4. LINE 1 FRYER, LINE 2 FRYER, LINE 3 FRYER AND, LINE 4 FRYER

4.1 Process Description

The line 1, line 2, line 3, and line 4 fryers are primarily used to process french fries. Batter is applied only to the line 4 fryer. The line 1, line 2, line 3, and line 4 fryers receive the potatoes after being sorted, steam peeled, cut and blanched, and dried. Line 3 is primarily used to process the pre-formed products. There is no dryer associated with the line 3 fryer. Hot cooking oil is used to partially cook the potatoes before they are frozen. Steam coils are used to supply the heat to the oil in the fryers.

Table 4.1 PROCESS DESCRIPTIONS

Process	Potato Capacity (Tons/day)	Date Installed/Modified	Manufacturer
Line 1 fryer	432	1968/1993	J.R. Simplot
Line 2 fryer	456	1968/not available	Gem Equipment
Line 3 fryer	72	1986/not available	Heat and Control Inc.
Line 4 fryer	264	1989/not available	Stein

4.2 Control Description

The PM_{10} emissions from the line 1 fryer, line 2 fryer, line 3 fryer, and line 4 fryer are controlled by the WESP. The WESP is manufactured by the Geoenergy International Corp.

Emission Limits

4.3 Emission Limits

The PM_{10} emissions from the WESP stack shall not exceed any corresponding emission rate limits listed in the Appendix A of this permit.

[IDAPA 58.01.01.403, 5/1/94]

Operating Requirements

4.4 Throughput Limit

The maximum throughput of finished potato product from the line 1 fryer, line 2 fryer, line 3 fryer, and line 4 fryer shall not exceed 1224 T/day. The maximum throughput of finished potato product from the line 1 fryer, line 2 fryer, line 3 fryer, and line 4 fryer shall not exceed 362,200 tons per any consecutive 12-month period.

[IDAPA 58.01.01.405, 5/1/94]

4.5 Fryer Exhausts

Emissions from the line 1 fryer, line 2 fryer, line 3 fryer, and line 4 fryer shall all exhaust through the WESP stack.

[IDAPA 58.01.01.405, 5/1/94]

4.6 WESP Operating Parameters

4.6.1 Within 60 days of issuance of this permit, the permittee shall install, calibrate, maintain, and operate equipment to monitor and record the secondary voltage at each T-R set for each field of the WESP, in accordance with manufacturer specifications.

4.6.2 The permittee shall install, calibrate, maintain, and operate equipment to measure the temperature differential between the inlet and outlet of the quench chamber of the WESP, in accordance with manufacturer specifications.

[IDAPA 58.01.01.405, 5/1/94]

Monitoring And Recordkeeping Requirements

4.7 Throughput

The permittee shall monitor and record, both daily and annually, the throughput of finished potato product from all four fryers at the facility to demonstrate compliance with Permit Condition 4.4. Throughput shall be recorded as tons per day and tons per year. The throughput for each day may be determined using monthly throughput records.

[IDAPA 58.01.01.405, 5/1/94]

4.8 PM_{10} Performance Tests

Within the first year of issuance of this permit, the permittee shall conduct a performance test to measure PM_{10} emissions from the WESP stack using the test methods and procedures contained in Permit Conditions 2.17 and 2.18 to demonstrate compliance with Permit Condition 4.3. The test shall be performed in accordance with IDAPA 58.01.01.157, and the following requirements:

4.8.1 Visible emissions shall be observed during each performance test run using methods specified in IDAPA 58.01.01.157.

4.8.2 The performance tests for the WESP stack shall be conducted while the fryers are operating at worst case normal operating conditions (as documented by the permittee) or while they are operating at a minimum of 80% of their maximum throughput limit (measured as finished potato product).

4.8.3 The secondary voltage at each Transform-Rectification (T-R) set for each field of the WESP in each section of the WESP shall be recorded during each performance test.

4.8.4 The temperature differential between the inlet and outlet of the quench chamber of the WESP shall be recorded during each performance test.

4.8.5 If the PM_{10} measured in the performance tests is less than or equal to 75% of the permitted PM_{10} emission limits in this permit, no further testing shall be required for this section of the permit. If the PM_{10} measured during the performance tests is greater than 75%, but less than or equal to 90% of the permitted PM_{10} emission limits in this permit, a second test shall be required in the third year of issuance of this permit. If the PM_{10} measured during the performance tests is greater than 90% of the permitted PM_{10} emission limits in this permit, the permittee shall conduct a performance test annually.

[IDAPA 58.01.01.405, 5/1/94]

4.9 O&M Manual

Within 60 days of issuance of this permit, the permittee shall have developed an O&M manual for the WESP in accordance with manufacturer specifications. The WESP shall be maintained within manufacturer and O&M manual specifications. The O&M manual shall address the operation, maintenance, and repair of the WESP and shall include, at a minimum, the following: a general description of the WESP, normal operating conditions and procedures, methods of preventing malfunctions, appropriate corrective actions to be taken, and provisions for weekly inspections. The O&M manual shall stipulate the secondary voltage at each T-R set for each field of the WESP and the temperature differential between the inlet and outlet of the WESP shall be maintained in accordance with manufacturer specifications. The O&M manual shall be maintained onsite at all times and shall be made available to Department representatives upon request.

[IDAPA 58.01.01.405, 5/1/94]

4.10 Recording the WESP Operating Parameters

4.10.1 The permittee shall record daily the secondary voltage at each T-R set for each field of the WESP.

[IDAPA 58.01.01.405, 5/1/94]

4.10.2 The permittee shall record daily the temperature differential between the inlet and outlet of the quench chamber of the WESP.

[IDAPA 58.01.01.405, 5/1/94]

5. SPRINGFIELD, CLEAVER-BROOKS, AND NEBRASKA BOILERS

5.1 Process Description

Simplot's Heyburn plant operates the following natural gas-fired boilers: Springfield boiler, Cleaver-Brooks boiler, and a Nebraska boiler with heat input capacities of 37.8 MMBtu/hr, 76.7 MMBtu/hr, and 80 MMBtu/hr, respectively. The Springfield and Cleaver-Brook boilers were installed in 1960 and 1968, respectively; while the Nebraska boiler was installed in 1999. The Springfield and Cleaver-Brooks boilers are not subject to New Source Performance Standards (Subpart Dc) because they were installed prior to the effective date of these regulations. The Nebraska boiler is subject to Subpart Dc. The Springfield and Nebraska boilers were permitted by the Department on November 15, 1999, and June 30, 2000, respectively.

5.2 Control Description

Emissions from the three boilers are uncontrolled. The Nebraska boiler has low NO_x burners.

Emissions Limits

5.3 Particulate Matter Emission Limits

The PM emissions from each of the boiler stacks shall not exceed 0.015 gr/dscf of effluent gas adjusted to 3% oxygen by volume when natural gas is combusted.

[IDAPA 58.01.01.676-677, 5/1/94]

5.4 PM_{10} Emission Limits

The PM_{10} emissions from each of the boiler stacks shall not exceed any corresponding emission rate limits listed in Appendix A of this permit.

[PTC No. 067-00017, 11/15/99; PTC No. 067-00017, 6/30/00; IDAPA 58.01.01.403, 5/1/94]

Operating Requirements

5.5 Fuel Specification

The boilers shall burn natural gas exclusively.

[PTC No. 067-00017, 11/15/99; PTC No. 067-00017, 6/30/00; IDAPA 58.01.01.405, 5/1/94]

5.6 Nebraska Boiler

The Nebraska boiler shall be equipped with low NO_x burner technology.

[PTC No. 067-00017, 6/30/00; IDAPA 58.01.01.405, 5/1/94]

Monitoring And Recordkeeping Requirements

5.7 Monitoring for Nebraska Boiler

The permittee shall record and maintain records of the amount of fuel combusted during each day in the boiler. The permittee shall maintain records for a period of five years following the date of such record.

[40 CFR 60.48c(g), 40 CFR 60.48c(i)]

6. ETHANOL PRODUCTION PLANT AND STORAGE TANKS

6.1 Process Description

The ethanol plant is a continuous-cook, batch-fermentation, and continuous-dehydration system. The production plant uses fruit, grain, and vegetable waste including potato waste from the Heyburn facility and other facilities, in combination with various chemicals and enzymes to produce a mixture of ethanol, water, and solids. The mixture is pumped to an atmospheric distillation tower where the ethanol is separated from the water and solids. The water and solids come out through the bottom of the tower and are pumped to a centrifuge; the centrifuge separates the solids from the liquids. The solids are sold to make cattle feed, and the liquids go to waste treatment. The ethanol is pumped from the distillation column to a molecular-sieve dehydrator for removal of the remaining water. The result is 200-proof alcohol that flows from the dehydrator to shift tanks.

6.2 Control Description

Emissions are uncontrolled.

Emissions Limits

6.3 Opacity Limit

Visible emissions from any of the ethanol production plant and the storage tanks stacks shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as determined in IDAPA 58.01.01.625.

[IDAPA 58.01.01.625, 5/1/94]

7. MATERIAL HANDLING SYSTEM

7.1 Process Description

The ethanol plant receives shelled corn, whole wheat, milo, granulated sugar, and other grains from delivery trucks. The raw material are moved several times via screw conveyors and recovery elevators into storage bins, surge bins, and weigh belts. Material is then dropped into a hammer mill to be ground into the correct size for use in the ethanol plant.

7.2 Control Description

The PM_{10} emissions from the receiving area, the material handling operations, and the hammer mill are controlled by a baghouse.

Operating Requirements

7.3 O&M Manual

Within 60 days of issuance of this permit, the permittee shall have developed an O&M manual for the air pollution control equipment of the material handling system in accordance with manufacturer specifications. The pressure drops across the baghouse shall be maintained within manufacturer and O&M manual specifications and shall be monitored and recorded once daily. The O&M manual shall address the operation, maintenance, and repair of the air pollution control equipment and shall include, at a minimum, the following: a general description, normal operating conditions and procedures, methods of preventing malfunctions, appropriate corrective actions to be taken, and provisions for weekly inspections.

[IDAPA 58.01.01.405, 5/1/94]

Monitoring And Recordkeeping Requirements

7.4 Monitor Pressure Drop

The permittee shall install, calibrate, maintain, and operate a pressure drop monitoring device that measures the pressure differential across the baghouse.

[IDAPA 58.01.01.405, 5/1/94]

7.5 Recordkeeping Requirements

The permittee shall monitor and record the pressure drop across the baghouse on daily basis. Recording the pressure drop will not be required on days the material handling system is not in operation.

[IDAPA 58.01.01.405, 5/1/94]

8. ADI-BVF DIGESTER FLARES

8.1 Process Description

The ADI-BVF anaerobic digester, where the water from the processed potatoes at the plant is retained and acted upon by bacteria, is located at the Simplot wastewater treatment facility. The biogas byproducts CH_4, CO_2, and H_2S are collected from under the cover of the digester and burned by a flare system. The biogas composition is approximately 60% CH_4, 40% CO_2, and less than 1% H_2S. Pollutants emitted from the biogas flares are PM, PM_{10}, SO_2, CO, and NO_x.

8.2 Control Description

Hydrogen sulfide emissions will be controlled by a scrubbing system located between the ADI-BVF anaerobic digester and the biogas flares. The specification of the scrubbing system are as follows, Manufacturer: Phoenix Biosystems Inc.; Type: Iron Sponge Gas Purifier; Model: Vartec-800, 3 Units in Parallel. The Phoenix system utilizes a modular bio-filter or bio-scrubber, which is packed with ferric-oxide-impregnated redwood chips (iron sponge) media to remove H_2S from the biogas stream. The scrubbing system consists of three down-flow, modular-fiberglass bio-filters, operated in parallel for the removal of 60% or more of the H_2S in the gas stream. Each bio-filter is a 12-foot diameter and 10-foot high container. The treated biogas will be mixed with untreated biogas before it is sent to the flares. When the biogas is flared, the methane is converted to CO_2 and water, and the H_2S is converted to SO_2.

A meter to measure the H_2S concentrations is placed after the outlet of the scrubber and prior to the flare.

The PM, CO, and NO_x emissions from the flares are uncontrolled.

Emissions Limits

8.3 ADI-BVF Digester Flare Emission Limits

The SO_2 emissions from the ADI-BVF digester flare stacks shall not exceed any corresponding emissions rate limits listed in Appendix A of this permit.

[IDAPA 58.01.01.405, 5/1/94]

Operating Requirements

8.4 Pilot Flame

The ADI-BVF digester flares shall be operated with a pilot flame present during the operation of the digester. In the event of a flame failure, the permittee shall follow a standard operating procedure to reinitiate the pilot flame as expeditiously as practicable.

[IDAPA 58.01.01.405, 5/1/94]

Monitoring And Recordkeeping Requirements

8.5 Pilot Flame Monitoring

Within 60 days of issuance of this permit, the permittee shall install, calibrate, maintain, and operate a thermocouple or similar device that detects the presence of a flame in the biogas flares.

[IDAPA 58.01.01.405, 5/1/94]

8.6 Hydrogen Sulfide Performance Test

Within the first year of issuance of this permit, the permittee shall conduct a performance test to measure H_2S concentration in the biogas prior to the biogas flares. This performance test, and any subsequent performance tests shall be conducted in accordance with Permit Conditions 2.17 and 2.18, and IDAPA 58.01.01.157.

[IDAPA 58.01.01.405, 5/1/94]

8.7 Biogas Flow and H_2S Concentrations Monitoring

Within one year of issuance of this permit, the permittee shall install, calibrate, and operate a biogas flow meter and an H_2S gas monitor that shall be placed after the outlet of the iron sponge and prior to the biogas flares.

The permittee shall monitor and record the biogas flow and the H_2S concentration on a weekly basis.

The permittee shall use the biogas flow rate and the H_2S concentration results to calculate the annual SO_2 emissions from the biogas flares..

[IDAPA 58.01.01.405, 5/1/94]

8.8 O&M Manual

Within 60 days of issuance of this permit, the permittee shall have developed an O&M manual in accordance with manufacturer specifications for the iron-sponge scrubber system. The iron-sponge scrubber system shall be maintained within manufacturer and O&M manual specifications. The O&M manual shall address the operation, maintenance, and repair of the iron-sponge scrubber system and shall include at a minimum, the following: a general description, normal operating conditions and procedures, methods of preventing malfunctions, appropriate corrective actions to be taken, and provisions for weekly inspections. The O&M manual shall include methods as described in the manufacturer specifications for a continuous regeneration of the system's media (i.e., iron oxide) to extend the life of this media. The O&M manual shall be maintained onsite at all times and shall be made available to Department representatives upon request.

[IDAPA 58.01.01.405, 5/1/94]

9. APPENDIX A – EMISSION RATE LIMITS

The following table provides the emission rate limits for the Heyburn facility.

J.R. Simplot Company, Heyburn

Table A.1 EMISSION LIMITS[A] HOURLY (LB/HR) AND ANNUAL[B] (T/YR)

SOURCE	PM_{10}		SO_2
	Lb/hr	T/yr	T/yr
Line 1 dryer stack	9.0	39.4	--
Line 2 dryer stack	8.5	37.2	--
Line 4 dryer stack	7.9	34.6	--
WESP stack (Lines 1, 2, 3, & 4 fryers)	10.53	46.1	--
Springfield boiler stack	0.28	1.2	--
Cleaver-Brooks boiler stack	0.57	2.5	--
Nebraska boiler stack	0.60	2.6	--
Biogas flare stacks	--	--	40.0
Total	37.38	163.60	40.0

[A] As determined by a pollutant-specific U.S. EPA reference method, the Department-approved alternative, or as determined by the Department's emission estimation methods used in the permit application analysis.

[B] As determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

10. APPENDIX B – FACILITY EMISSIONS INVENTORY

The following table is summary of the criteria air pollutant emissions for the facility based on potential to emit. The emissions inventory table is for informational purposes only.

Table B.1 FACILITY EMISSIONS SUMMARY

J.R. Simplot CO., Heyburn Emissions Summary –Annual (T/yr), PTE					
Source Description	**PM_{10}**	**NO_x**	**CO**	**VOC**	**SO_2**
Line 1 dryer stack	39.4	10.4	8.7	0.6	0.1
Line 2 dryer stack	37.2	9.4	7.9	0.5	0.1
Line 4 dryer stack	34.6	1.6	1.4	0.1	0.01
WESP stack (Lines 1, 2, 3, and 4 fryer)	46.1	--	--	32.1	--
Springfield boiler stack	1.2	16.2	13.6	0.9	0.1
Cleaver-Brooks boiler stack	2.5	32.9	27.7	1.8	0.2
Nebraska boiler stack	2.6	34.3	28.9	1.9	0.2
Material handling system stack	0.7	--	--	--	--
Biogas flare stacks	1.2	11.2	60.8	0.9	40.0
Ethanol production plant stack	--	--	--	19	--
Ethanol storage tanks	--	--	--	14	--
Air makeup units	2.2	28.6	24.0	1.6	0.2
Total	167.7	144.6	173.0	73.4	40.91

11. GENERAL PROVISIONS

1. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The emission of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code 39-101 et seq.

2. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain and operate in good working order all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable laws for the control of air pollution.

3. The permittee shall allow the Director, and/or his authorized representative(s), upon the presentation of credentials:

   - To enter upon the permittee's premises where an emissions source is located, or in which any records are required to be kept under the terms and conditions of this permit.

   - At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and to require stack emissions testing (i.e., performance tests) in conformance with state-approved or accepted EPA procedures when deemed appropriate by the Director.

4. Except for data determined to be confidential under Section 9-342A *Idaho Code*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate regional office of the Department of Environmental Quality.

5. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.

6. In the event of any change in control or ownership of source(s) from which the authorized emissions emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter; a copy of which shall be forwarded to the Director.

7. This permit shall be renewable on the expiration date, provided the permittee submits any and all information necessary for the Director to determine the amount and type of air pollutants emitted from the equipment for which this permit is granted. Failure to submit such information within 60 days after receipt of the Director's request shall cause the permit to become void.

8. The Director may require the permittee to develop a list of operation and maintenance procedures to be approved by the Department. Such list of procedures shall become a part of this permit by reference, and the permittee shall adhere to all of the operation and maintenance procedures contained therein.

9. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.